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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,984	08/26/2003	Eric M. Gross	D/A1432D	6726

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EXAMINER

NOTE, JANIS L

ART UNIT PAPER NUMBER

1756

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

✓19

<b>Office Action Summary</b>	<b>Application No.</b> 10/649,984	<b>Applicant(s)</b> GROSS ET AL.	
	<b>Examiner</b> Janis L. Dote	<b>Art Unit</b> 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/26/03</u> . | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1756

1. This is a division of copending US application serial No. 10/012,440, filed on Dec. 21, 2001, which is now abandoned.

2. The references US 4,073,965 and US 3,918,968, cited by the examiner in the parent application, 10/012,440, will be considered in this divisional application. MPEP 609(I)(A)(2) (8<sup>th</sup> edition, Rev. 2, May 2004). Applicants' list of those references was not proper because applicants did not provide a list (e.g., the form PTO-1449), which identified this application. The examiner has properly listed those references on the attached form PTO-892.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description:

In Fig. 2,

(1) Reference sign **41**, which is identified as a magnetic roller at page 12, lines 13, 17, and 19, page 14, line 3;

(2) Reference sign **168**, which is identified as "the direction of arrow" at page 12, line 16;

(3) Reference sign **170**, which is identified as "the direction of arrow" at page 12, line 19;

Art Unit: 1756

(4) Reference sign **178**, which is identified as AC voltage source at page 13, line 11;

(5) Reference sign **180**, which is identified as bias supply at page 13, line 16;

(6) Reference sign **184**, which is identified as DC bias supply at page 14, line 7; and

(7) Reference sign **215**, which is identified as controller at page 15, line 15.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:

(1) Reference character **16** in Fig. 1 has been used to designate "tensioning roller" (see page 8, lines 6-7, of the specification), "output" (see page 10, lines 17 and 21, of the specification), and "exit path" (see page 11, line 5, of the specification).

Art Unit: 1756

(2) Reference character **44** in Fig. 2 has been used to designate both "electrode wires" (see page 12, line 12, of the specification) and "housing" (see page 14, line 12, of the specification).

(2) Reference characters **40** and **44** have both been used to designate "housing." See page 12, lines 11 and 13, page 14, line 12, and page 16, line 11, of the specification.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

(1) In Fig. 1, the reference signs **55, 84, 112, 120,** and **125.** See the specification, pages 7-12.

(2) In Fig. 2, the reference signs **46, 68, 76, 78, 81, 84, 85, 86, 88, 90, 92, and 94.** See the specification, pages 12-16.

Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should

Art Unit: 1756

include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to because:

(1) The specification identifies the reference sign 42 as a donor roller. See pages 12-13. However, in Fig. 2, the donor roller is not labeled with the reference sign 42, but with the reference sign 40. Reference sign 42 appears to label "electrode wires."

(2) The specification identifies the reference sign 40 as "housing." See page 12, lines 11 and 13. However, in Fig. 2, the "housing" is not labeled with the reference sign 40, but with the reference sign 44.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

Art Unit: 1756

any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The disclosure is objected to because of the following informalities:

(1) The specification at page 1, line 1, discloses the US application serial No. 10/012,440, but fails to identify the current status of the application.

(2) The use of trademarks, e.g., Xerox [sic: XEROX] at page 16, lines 16 and 17, has been noted in this application. The trademarks should be capitalized wherever they appear and be accompanied by the generic terminology. This example is not exhaustive. Applicants should review the entire specification for compliance.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Appropriate correction is required.

Art Unit: 1756

8. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

(1) In claim 3, the recitation "a coating thereon possesses said substantially high diffuse reflectivity" lacks antecedent basis in the specification. See the specification, page 17, lines 12-13, which discloses that the carrier, not the carrier coating, has a "substantially high diffuse reflectivity greater than 20 percent." (Note that originally filed claim 5 in parent application 10/021,440, recited the limitation the "coating [on the carrier] has a substantially high diffuse reflectivity.")

(2) In claim 6, the recitation "toner has a diffuse reflectivity between 0% and 20%" lacks antecedent basis in the specification. See the specification, pages 18-19. (Note that originally filed claim 7 in parent application 10/021,440, recited the limitation the "toner has a diffuse reflectivity between 0% and 20%.")

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.



Art Unit: 1756

10. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 is indefinite in the phrase "[t]he developer composition of claim 2" (emphasis added) for lack of antecedent basis in claim 2. Claim 2, which depends from claim 1, recites "a process for improving the signal to noise ratio of a developer," not a developer composition. It is not clear what invention applicants are intending to claim.

Claim 4 is indefinite in the phrase "[t]he process of claim 3" (emphasis added) for lack of antecedent basis in claim 3, which recites "the developer composition of claim 2," not a process. It is not clear what invention applicants are intending to claim.

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 1756

12. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 4 recites "the process of claim 3, said coating includes a pigment which possesses said substantially high diffuse reflectivity."

The originally filed specification in parent application 10/012,440 (Application'440) does not provide an adequate written description of said coating.

The originally filed specification in the parent application discloses a carrier with substantially high diffuse reflectivity greater than 20 percent. See Application'440, page 14, lines 21-22. The originally filed specification further discloses "a carrier coating containing a magenta pigment incorporated into a thermosetting polyurethane." See Application'440, page 15, lines 16-17. Originally filed claim 4 in the parent application recites a carrier coating that "includes a colorant pigment." The term "pigment" recited in instant claim 4 is broader than the disclosed magenta pigment

Art Unit: 1756

and the term "colorant pigment" recited in originally filed claim 4 in the parent application, because it includes pigments other than colorant pigments, such as white pigments. Moreover, there is no disclosure in the originally filed specification in parent application 10/012,440, of a pigment having a "substantially high diffuse reflectivity of greater than 20 percent" as recited in instant claim 4.

13. Claims 1-3 are objected to because of the following informalities: The claims do not use proper idiomatic English.

In claim 1, the noun/verb number mismatch in the phrase "optical sensor which measure the toner concentration" (emphasis added).

In claim 2, the phrase "substantially high diffuse reflectivity between 20 and 50 percent" is missing the verb "is." The phrase should be rewritten to read ". . . diffuse reflectivity is between . . ." (emphasis added).

In claim 3, the phrase "carrier has a coating thereon possesses . . ." is missing the term "which." The phrase should be rewritten to read " carrier has a coating thereon which possesses . . ." (emphasis added).

Appropriate correction is required.

Art Unit: 1756

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f), or (g) prior art under 35 U.S.C. 103(a).

17. In the interest of compact prosecution, the examiner has interpreted claim 3 as being drawn to a developer comprising a toner and a carrier having a coating that possesses a

Art Unit: 1756

substantially high diffuse reflectively between 20 and 50 percent.

The examiner has interpreted claim 4 as being drawn to a process comprising the step of "subjecting the developer to an optical sensor which measure[s] the toner concentration and wherein said developer is comprised of a toner and a carrier, wherein said carrier possesses a substantially high diffuse reflectivity" of between 20 and 50 percent, and the carrier has a coating that includes a pigment which possesses said substantially high diffuse reflectivity.

Rejections based on these interpretations are set forth infra.

18. Claim 3 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US 4,073,965 (Mammio'965), as evidenced by US 4,989,985 (Hubble'985).

Mammio'965 discloses a developer composition comprising a yellow toner and a carrier. Col. 8, lines 43-57. The carrier comprises steel particles coated with a coating comprising a resin and the cyan pigment Sudan Blue OS, copper tetra-4-(octadecyl-sulfonamido)phthalocyanine. Col. 6, lines 42-45.

Art Unit: 1756

Mammino'965 does not disclose that its carrier and carrier coating have a substantially high diffuse reflectivity as recited in instant claim 3. However, Hubble'985 at col. 9, lines 30-40, provides a table of the approximate reflective properties of toner materials at 880-nm incident wavelength. Hubble'985 discloses that the diffuse reflectivities for a yellow toner, a magenta toner, a cyan toner, and a black toner are 60%, 64%, 44%, and 1%, respectively. As discussed, supra, the Mammino'965 carrier is coated with a resin comprising a cyan pigment. Thus, it is reasonable to conclude that Mammino'965's carrier is cyan-colored. Accordingly, given the disclosure in Hubble'985, it is reasonable to presume that the Mammino'965 carrier coating and the Mammino'965 carrier coated with said coating have a diffuse reflectivity of about 44%. The diffuse reflectivity of about 44% meets the diffuse reflectivity limitations recited in instant claim 3. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

19. Claim 3 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US 3,918,968 (Kukla), as evidenced by Hubble'985.

Art Unit: 1756

Kukla discloses a developer comprising a black colored toner and a carrier. The black colored toner is the commercially available "Hunt Graph-O-Print toner" or IBM Part No. 1162057, both of which comprise a binder resin and carbon black pigment. The carrier comprises steel particles coated with a coating comprising a TEFLON resin and the cyan pigment cobalt aluminate. Col. 8, lines 13-24; and example III at col. 10.

Kukla does not disclose that the carrier and carrier coating have a "substantially high diffuse reflectivity" as recited in instant claim 3. However, Hubble'985 provides a table of the approximate reflective properties of toner materials at 880-nm incident wavelength. The discussion of Hubble'985 in paragraph 18, supra, is incorporated herein by reference. As discussed, supra, Kukla's carrier is coated with a resin comprising a cyan pigment. Thus, it is reasonable to conclude that Kukla's carrier is cyan-colored. Accordingly, given the disclosure in Hubble'985, it is reasonable to presume that the Kukla carrier coating and the Kukla carrier coated with said coating have a diffuse reflectivity of about 44%. The diffuse reflectivity of about 44% meets the diffuse reflectivity range of between 20 to 50% recited in instant claim 3. The burden is on applicants to prove otherwise. Fitzgerald, supra.

Art Unit: 1756

20. Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,043,293 (Ruckdeschel) combined with Mammino'965, as evidenced by Hubble'985.

Ruckdeschel discloses a color image forming process comprising the step of developing an electrostatic latent image with a magnetic brush developing unit comprising a yellow developer to form a yellow toner image. The developer comprises a magnetic carrier and a yellow toner. Col. 3, line 59, to col. 4, line 3, and col. 4, lines 15-17. The process further comprises the step of adding additional toner particles to the developer mixture when the developability "is reduced deleteriously." Col. 4, lines 19-22. The toner concentration in the developer mixture is determined by flowing the developer mixture between two parallel plates that form a transparent electrode. The transparent electrode attracts the toner particles from the carrier particles and the toner particles adhere to the transparent electrode. Light rays are transmitted through the transparent electrode and detected by photosensors. The photosensors detect the intensity of the light rays transmitted through the toner particles adhering to the electrode and generate an electric signal that controls the addition of the toner particles to the developer mixture.



Art Unit: 1756

Col. 6, line 27, to col. 9, line 6; and Fig. 2. Ruckdeschel's process for determining the toner concentration in the developer mixture meets the step "subjecting the developer to an optical sensor" as recited in the instant claims.

Ruckdeschel does not disclose the use of a developer as recited in the instant claims.

Mammino'965, as evidenced by Hubble'985, discloses a yellow developer composition comprising a yellow toner and a carrier as described in paragraph 18 above, which is incorporated herein by reference. For the reasons discussed in paragraph 18 above, it is reasonable to presume that the carrier and the carrier coating disclosed by Mammino'965 have the diffuse reflectivity recited in instant claim 2.

Mammino'965 does not disclose that the cyan pigment in its carrier's coating has the "substantially high diffuse reflectivity" as recited in instant claim 4. Nor does Mammino'965 disclose the difference in reflectivity between its yellow toner and its carrier as recited in instant claim 5. However, as discussed in paragraph 18 above, Hubble'985 discloses that the diffuse reflectivities for a yellow toner, a magenta toner, a cyan toner, and a black toner are 60%, 64%, 44%, and 1%, respectively. For the reasons discussed in paragraph 18 above, it is reasonable to conclude Mammino'965

Art Unit: 1756

carrier's coating has a diffuse reflectivity of about 44%, which meets the diffuse reflectivity limitations recited in instant claim 2. Because the Mammino'965 carrier's coating comprises the cyan pigment, it is also reasonable to presume that the cyan pigment has the diffuse reflectivity of about 44%. The burden is on applicants to prove otherwise. Fitzgerald, supra.

In addition, given the disclosure in Hubble'985, it is also reasonable to presume that Mammino'965's yellow toner has a diffuse reflectivity of about 60%. The difference of the diffuse reflectivity between the Mammino'965 carrier and yellow toner is about 24%. The difference of about 24% is within the range of "greater than 5 percent" recited in instant claim 5. The burden is on applicants to prove otherwise. Fitzgerald, supra.

Mammino'965 discloses that its developer produces superior yellow images and sharp true reproductions in color electrophotographic imaging processes. Its developer also is said to have a long developer life. Col. 3, lines 22-25 and 33-36. Mammino'965 further discloses that its developer may be used in a magnetic brush developing unit. Col. 7, lines 15-17.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Mammino'965, to

Art Unit: 1756

use the yellow developer disclosed by Mammino'985, as the yellow developer in the process disclosed by Ruckdeschel, because that person would have had a reasonable expectation of successfully obtaining a color image forming process that provides superior yellow toned images and sharp true color reproductions for a long period of time.

The recitation "for improving the signal to noise ratio of a developer" in the instant claims is a statement of intended use, which does not distinguish the process rendered obvious over the combined teachings of the cited prior art. The recitation of the intended use must result in a structural difference between the claimed invention and the prior art or in a process, a manipulative difference, in order to patentably distinguish the claimed invention from the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). As discussed above, the process rendered obvious over the cited prior art meets the step recited in the instant claims. Thus, the intended use recited in the instant claims does not result in a difference between the process recited in the instant claims and the process rendered obvious over the cited prior art.

Art Unit: 1756

21. Claims 1, 2, and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 3,635,373 (Kuhl) combined with Kukla, as evidenced by Hubble'985.

Kuhl discloses an imaging process comprising the step of developing an electrostatic latent image by cascading a developer over the latent image to form a toner image. The developer comprises a carrier and a toner. Col. 3, lines 28-52. The process further comprises the step of controlling the toner concentration in the developer mixture. The toner concentration in the developer is determined by flowing the developer mixture between two parallel plates 48 and 50. The plates attract the toner particles from the carrier particles and the toner particles adhere to the plates. Light rays from a light source L-1 are transmitted through the two parallel plates and detected by a photocell P-1. The photocell measures the optical density of the toner particles deposited on the two plates. The optical density is compared with light received by a second photocell P-2 separated from the same light source by a filter; the intensity difference is used to control the addition of the toner particles to the developer mixture. Col. 2, lines 16-43, col. 4, line 55, to col. 6, line 20, and Fig. 2. Kuhl's process for determining the toner concentration in the developer mixture

Art Unit: 1756

meets the step "subjecting the developer to an optical sensor" as recited in the instant claims.

Kuhl does not disclose the use of a developer as recited in the instant claims.

Kukla, as evidenced by Hubble'985, discloses a developer composition comprising a toner and a carrier as described in paragraph 19 above, which is incorporated herein by reference. For the reasons discussed in paragraph 19 above, it is reasonable to presume that the carrier and the carrier coating disclosed by Kukla have the diffuse reflectivity recited in instant claim 2.

Kukla does not disclose that the cyan pigment in its carrier's coating has the "substantially high diffuse reflectivity" as recited in instant claim 4. Nor does Kukla disclose the difference in reflectivity between its black toner and carrier as recited in instant claim 5. However, as discussed in paragraph 19 above, Hubble'985 discloses that the diffuse reflectivities for a yellow toner, a magenta toner, a cyan toner, and a black toner are 60%, 64%, 44%, and 1%, respectively. As discussed in paragraph 19, it is reasonable to presume that Kukla carrier's coating has a diffuse reflectivity of about 44%, which meets the diffuse reflectivity limitation recited in instant claim 2. Because the Kukla carrier's coating

Art Unit: 1756

comprises the cyan pigment, it is also reasonable to presume that the cyan pigment has the diffuse reflectivity of about 44%. The burden is on applicants to prove otherwise. Fitzgerald, supra.

In addition, given the disclosure in Hubble'985, it is also reasonable to presume that Kukla's black toner has a diffuse reflectivity of about 1%, which is within the range of 0 to 20% recited in instant claim 6. The difference of the diffuse reflectivity between the Kukla carrier and black toner is about 34%. The difference of about 34% is within the range of "greater than 5 percent" recited in instant claim 5. The burden is on applicants to prove otherwise. Fitzgerald, supra.

Kukla discloses that its developer produces high quality copies. Its carrier has a relatively long life. Col. 4, lines 1-3, col. 5, lines 32-34, and col. 16, line 66, to col. 17, line 4. Kukla further discloses that its developer may be used in a cascade developing step. Col. 12, lines 8-9.

It would have been obvious for a person having ordinary skill in the art to use the developer disclosed by Kukla in the process disclosed by Kuhl, because that person would have had a reasonable expectation of successfully obtaining an image forming process that provides high quality copies for a long period of time.

Art Unit: 1756

The recitation "for improving the signal to noise ratio of a developer" in the instant claims is a statement of intended use, which does not distinguish the process rendered obvious over the combined teachings of the cited prior art. The recitation of the intended use must result in a structural difference between the claimed invention and the prior art or in a process, a manipulative difference, in order to patentably distinguish the claimed invention from the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). As discussed above, the process rendered obvious over the cited prior art meets the step recited in the instant claims. Thus, the intended use recited in the instant claims does not result in a difference between the process recited in the instant claims and the process rendered obvious over the cited prior art.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (703) 872-9306.

Any inquiry of papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Art Unit: 1756

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLD

Aug. 2, 2004

*Janis L. Dote*  
JANIS L. DOTE  
PRIMARY EXAMINER  
GROUP 1500  
1700